



National Standards Authority of Ireland

IRISH STANDARD

I.S. ENV 196-4:1994

ICS 91.100.10
19.020

**METHODS OF TESTING CEMENT –
PART 4: QUANTITATIVE DETERMINATION
OF CONSTITUENTS**

National Standards
Authority of Ireland
Dublin 9
Ireland

Tel: (01) 807 3800
Tel: (01) 807 3838

*This Irish Standard was
published under the
authority of the National
Standards Authority of
Ireland
and comes into effect on
March 25, 1994*

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 1994

Price Code M

Údarás um Chaighdeáin Náisiúnta na hÉireann

DECLARATION

OF

SPECIFICATION

ENTITLED

METHODS OF TESTING CEMENT – PART 4: QUANTITATIVE

DETERMINATION OF CONSTITUENTS

AS

THE IRISH STANDARD SPECIFICATION FOR

METHODS OF TESTING CEMENT – PART 4: QUANTITATIVE

DETERMINATION OF CONSTITUENTS

Forfás in exercise of the power conferred by section 20 (3) of the Industrial Research and Standards Act, 1961 (No. 20 of 1961) and the Industrial Development Act, 1993 (No. 19 of 1993), and with the consent of the Minister for Enterprise and Employment, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Methods of Testing Cement – Part 4: Quantitative Determination of Constituents) Declaration, 1994.
2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Methods of Testing Cement – Part 4: Quantitative Determination of Constituents. The Schedule comprises the text of ENV 196-4 : 1993.

(2) The said standard specification may be cited as Irish Standard/ENV 196-4:1994 or as I.S./ENV 196-4:1994.

EUROPEAN PRESTANDARD

ENV 196-4:1993

PRÉNORME EUROPÉENNE

EUROPÄISCHE VORNORM

July 1993

UDC 666.94:691.54:620.1:539.215

Supersedes ENV 196-4:1989

Descriptors: Cement, determination, components, slags, cement clinker, pozzolans, ashes, tests

English version

Methods of testing cement - Part 4: Quantitative determination of constituents

Méthodes d'essais des ciments - Partie 4:
Détermination quantitative des constituants

Prüfverfahren für Zement - Teil 4: Quantitative
Bestimmung der Bestandteile

This European Prestandard (ENV) was approved by CEN on 1993-01-08 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into an European Standard (EN).

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Contents list	Page
Foreword	3
1 Scope	4
2 Normative references	4
3 General requirements for testing	5
3.1 Number of tests	5
3.2 Determination of constant mass	6
3.3 Expression of masses and results	6
3.4 Repeatability and reproducibility	6
4 Preparation of a cement sample	7
5 Reagents	7
6 Determination of the contents of cement constituents	7
6.1 General	7
6.2 Selective dissolution method	8
6.2.1 Principle	8
6.2.2 Reagents	9
6.2.3 Apparatus	9
6.2.4 Procedure	10
6.2.5 Calculation of the contents of cement constituents	13
6.2.6 Repeatability and reproducibility	16
6.2.7 Qualitative determination of cement type	16
7 Determination of the contents of constituents for cements with three constituents	17
7.1 General	17
7.2 Determination of the slag content	17
7.2.1 Dense liquid separation method	17
7.2.2 Microscope method	24
7.3 Determination of the fly ash content	29
7.3.1 Selective dissolution method	29
7.4 Determination of the pozzolana content	31
7.4.1 Selective dissolution method	31
7.4.2 Dense liquid separation method	34

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-